Launch Mission Execution Forecast

Mission: Falcon 9 StarlinkV1.0-L14
Issued: 21 Oct 2020 / 0900L (1300Z)
Valid: 22 Oct 2020 / 1204 – 1225L (1604 – 1625Z)

Forecast Discussion: A mid-level inverted trough and its associated easterly wave crossing the state today will bring higher moisture, cloud cover, and instability, leading to a higher coverage of showers and storms as we go through the remainder of the day. The trough and wave will slide farther west by Thursday, allowing just enough drier air to work in that coverage of clouds and showers across the Spaceport will be a little lower into the primary launch window midday. However, enough mid-level cloud cover will linger that the Thick Cloud Layer Rule will remain the primary concern. There will also be a concern for Cumulus Cloud Rule violations as onshore moving showers, though more scattered, continue in the breezy easterly flow.

Pressure gradient relaxes by the end of the week, with the strong easterly flow gradually diminishing. Cumulus Clouds associated with any onshore moving Atlantic showers will be the primary weather concern as we go into the backup launch window on Friday.

Launch Day

Probability of Violating Weather Constraints

50%

Primary Concerns: Thick Cloud Layer Rule, Cumulus Cloud Rule

Weather Conditions

Weather/Visibility:	Sct. Showers / 7 mi.
Temp/Humidity:	82°F / 75%
Liftoff Winds (200'):	100° 15 - 20 mph

Clouds

Type	Coverage	Base (ft)	Tops (ft)
Cumulus	Scattered	2,500	9,000
Altostratus	Broken	11,000	15,000

Additional Risk Criteria

Upper-Level Wind Shear:	Low
Booster Recovery Weather:	High
Solar Activity:	Low

24-Hour Delay

Probability of Violating Weather Constraints

40%

Primary Concerns: Cumulus Cloud Rule

Weather Conditions

Weather/Visibility:	None / 7 mi.
Temp/Humidity:	81°F / 73%
Liftoff Winds (200'):	100° 15 - 20 mph

Clouds

Type	Coverage	Base (ft)	Tops (ft)
Cumulus	Scattered	3,000	8,000
Cirrus	Scattered	25,000	30,000

Additional Risk Criteria

Upper-Level Wind Shear:	Low
Booster Recovery Weather:	Moderate
Solar Activity:	Low

***Note**: The Probability of Violation (POV) is the chance that a Lightning Launch Commit Criteria (LLCC) or certain user constraints (surface winds, precipitation, and temperatures, etc.) will be violated during the launch window. It does not take into account upper-level wind shear, booster recovery weather, and solar activity.*

Next Forecast Will Be Issued	As Needed